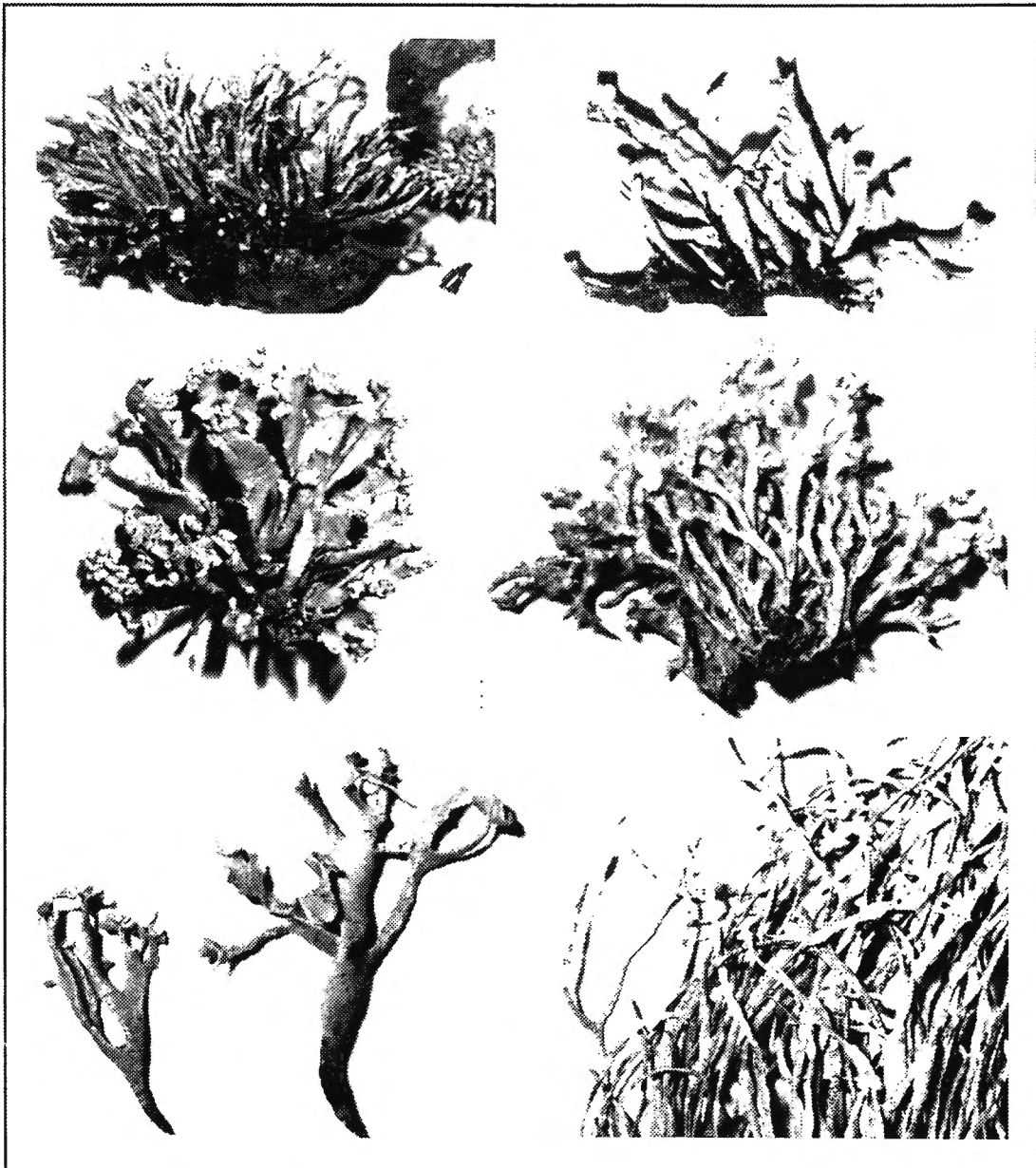


Bulletin of the California Lichen Society



Volume 2

No. 2

Winter 1995

The California Lichen Society seeks to promote the appreciation, conservation, and study of the lichens. The focus of the Society is on California, but its interests include the entire western part of the continent. Dues are \$15 per year payable to The California Lichen Society, 1200 Brickyard Way, #302, Point Richmond, CA 94801. Members receive the *Bulletin* and notices of meetings, field trips, and workshops.

The *Bulletin of the California Lichen Society* is edited by Isabelle Tavares, Shirley Tucker, and Darrell Wright and is produced by Darrell Wright with help from Nancy Brewer. The *Bulletin* welcomes manuscripts on technical topics in lichenology relating to western North America and on conservation of the lichens, as well as news of lichenologists and their activities. The best way to submit manuscripts apart from short articles and announcements is on 1.2 or 1.44 Mb diskette in Word Perfect 4.1, 4.2 or 5.1 format; ASCII format is an alternative. A review process is followed, and typed manuscripts should be double-spaced and submitted as two copies. Figures are the usual line drawings and sharp black and white glossy photos, unmounted. Nomenclature follows Egan's Fifth Checklist and supplements (Egan 1987, 1989, 1990: this bibliography is in the article on the Sonoma-Mendocino County field trip, Bull. Cal. Lich. Soc. 1(2):3). Style follows this issue. Reprints will be provided for a nominal charge. Address submittals and correspondence to The California Lichen Society, c/o Darrell Wright, 2337 Prince Street, Berkeley, CA 94705, 510-844-8220, voice and FAX; E-mail: dwright@emf.net (new address as of this issue).

Volume 2(2) of the *Bulletin* was issued December 30, 1995. Contributors were Isabelle Tavares, University Herbarium, University of California, Berkeley, CA 94720; Richard Riefner, Jr., and Peter Bowler, Department of Ecology and Evolutionary Biology, University of California, Irvine CA, 92717; Bruce Ryan, Department of Botany, Arizona State University, Tempe, AZ 85287-1601; Shirley Tucker, Department of Biological Sciences, University of California, Santa Barbara, CA 93106-9610; Charis Bratt, Santa Barbara Museum of Natural History, 2559 Puesta del Sol Road, Santa Barbara, CA 93105; Mikki McGee, 200 Monterey Street, #11, Brisbane, CA 94005; Barbara Lachelt, 76 Angela Avenue, San Anselmo, CA 94960; and Janet Doell, CALS, 1200 Brickyard Way, #302, Pt. Richmond, CA 94801.

Cover: A panel of *Niebla* species from Marin County (see diagram below).

1. *N. ceruchoides* Rundel & Bowler, det. P.W. Rundel, Angel Island, *W.P. Jordan 998* (SFSU), 1.5x.
2. *N. robusta* (R.H. Howe, Jr.) Rundel & Bowler, mouth of the Estero Americano, *Wright 4699*, 1.9x.
3. *N. laevigata* Bowler & Rundel (form with "cauliflower" lobe tips, verified by P.A. Bowler), mouth of the Estero Americano, *Wright 4701*, 1.6x.
4. *N. cephalota* (Tuck.) Rundel & Bowler, Little Mountain west of Novato, *Wright 5069*, 2x.
5. *N. homalea* (Ach.) Rundel & Bowler (stout form), Vincent Landing, Tomales Bay, *Wright 3308*, 1x.
6. *N. homalea* (slender form), Bolinas Ridge N of Pt. Reyes Station, *Wright 2467*, 1.3x.

For *N. ceruchoides* and *N. laevigata*, see P.A. Bowler and R.E. Riefner, Jr., *Phytologia* 77(1): 23-37, 1994; for *N. cephalota* and *N. robusta*, R.H. Howe, Jr., *The Bryologist* 16: 65-74, 1913; and P.W. Rundel and P.A. Bowler, *Mycotaxon* 6: 497-499, 1978. All *Wright* collections are in herb. Wright. Photography by R. Stewart and D. Wright.

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The Lichen Herbarium, University Herbarium (UC),
University of California at Berkeley

Isabelle Tavares

The UC lichen herbarium consists of about 18,000 accessioned specimens and several thousand unaccessioned specimens. It is housed in the University Herbarium (acronym is UC) on the first floor of the Valley Life Sciences Building on the campus.

Early records indicate that the first lichens deposited in this herbarium were exchange specimens received in 1893 from Clara E. Cummings, Wellesley, Massachusetts. About this time Marshall A. Howe added a series of lichens from the upper Sacramento River area. Many lichens collected by W. A. Setchell were deposited in the herbarium following an Alaskan expedition in 1899. Prof. Setchell added his New England lichen collections to the herbarium in 1903. During the 1920s, lichens were collected for UC by Setchell and H. E. Parks in Tahiti and other South Pacific islands. Among the exchanges received from European herbaria was a series of Brazilian lichens collected by G. Malme, received about 1935. In the 1940s, T. H. Goodspeed's expeditions to the Andes began to accumulate lichens of western South America for UC. As a result of various exchanges, the lichen herbarium incorporated considerable material from northern and central Europe, as well as eastern North America, which has been useful for making comparisons with local taxa. Among the Californian collections are specimens collected by H. N. Bolander, H. E. Hasse, A. W. C. T. Herre, and W. A. Weber. The lichen herbarium of T. Elliot Weier, recently incorporated into UC, is rich in crustose specimens from the Sierra Nevada.

Although there has always been some interest in lichens here, the only formal lichen class may have been a seminar course offered by Vernon Ahmadjian during his 1966 visit to Berkeley. Shortly thereafter, Doris E. Baltzo and I began the effort to acquire sufficient knowledge to be able to annotate the collections and started the process of bringing the generic designations up-to-date that has continued until the present time. Prior to this time, the herbarium had relied heavily on many lichenologists, such as E. Vainio, C. W. Dodge, A. W. C. T. Herre, and W. A. Weber, for identifications.

In keeping with the public service tradition of the herbarium, we have provided lichen identifications and information about lichens for students of various California colleges and universities, many organizations, and members of the general public.

New and Interesting Records of Lichens from California

Richard E. Riefner, Jr., Peter A. Bowler, and
Bruce D. Ryan

Abstract: *Twenty lichen species are reported from California for the first time. New information for 59 species considered rare, local, or which represent noteworthy extensions of range, is also presented. Seven unidentified taxa are discussed.*

Tucker and Jordan (1979) published a catalog of 999 species, 4 subspecies, 57 varieties, and 42 forms of lichens thought to occur in California. This was compiled by reviewing taxa reported in the literature. Since this checklist was published, a large number of additional species have been described or reported from California in articles on taxonomy, nomenclature, and phytogeography, and in books and guides such as Hale and Cole (1988).

In comparison, the vascular flora includes more than 5,800 species, of which about 24% are endemic (Wilken 1993). California lichens, however, exhibit a very low 1% endemism rate in the foliose and fruticose forms as discussed by Hale and Cole (1988). According to Wilken (1995), as much as 79.5% of the California Floristic Province and 73% of the entire State remain poorly inventoried. The recent description of numerous new taxa in common and conspicuous lichen genera such as *Cladonia*, *Lecanora*, *Niebla*, and *Ramalina*, and reports of many lichens new to North America clearly indicate that our knowledge of the lichen flora of California is even weaker. Shevock and Taylor (1987) reported that the overwhelming majority of vascular plant collections occurred adjacent to existing roads, with the more remote areas of California receiving only cursory attention. In this paper as well, most of the new records are made from surveys conducted along easily accessible highways in the coastal lowlands. Two forays into the more remote areas of the southern Sierra Nevada by the senior author both yielded new State records! Our ignorance of the relative abundance and distribution of many lichen species, both common and historically rare, has hindered conservation action, since dubious or poorly known taxa have a low priority, especially when resource management dollars are scarce. Carefully designed systematic and field studies are needed to adequately document the lichen flora of California if we hope to protect one of California's most overlooked and diminishing natural resources.

All Riefner and Bowler collections are deposited in the herbarium of the University of California, Irvine's Museum

of Systematic Biology (IRVC) with duplicates cited where appropriate, while all *Ryan* collections are deposited in the herbarium of Arizona State University (ASU). A few of the species reported as new State records are actually locally abundant or widespread in the State, but only a few representative collections of the taxon are cited for the purposes of this paper. Thin layer chromatography (TLC) data may be included where secondary product chemistry is diagnostic or when new information on the chemical content of a taxon is reported.

New State Records

***Caloplaca atroflava* (Turner) Mong.** SAN LUIS OBISPO CO.: on shale in open oak woodland, Morro Bay region, *Riefner 90-51* (WIS).

***Caloplaca castellana* (Räsänen) Poelt** (*C. invadens* Lyngé). SAN LUIS OBISPO CO.: on a Monterey shale cliff in fog belt, Montaña de Oro State Park, *Riefner 88-265* (WIS).

***Caloplaca sipeana* Magnusson.** LOS ANGELES CO.: on rocks just above the high tide limit and on coastal bluffs near the Field Station, San Clemente Island, *Riefner and Bowler 89-113* (WIS). Distinguished by its scattered, plane squamules and spores 12-14 x 7-8 μ m. It is also found on seashore rocks in northern Baja California, Mexico. This taxon was included in a discussion of the *C. squamosa* group of littoral species of *Caloplaca* in North America by Arup (1995b); he observes that the group is in desperate need of revision. *C. squamosa* (B. de Lesd.) Zahlbr. was reported from California by Sigal (1975).

***Caloplaca stillicidiorum* (Vahl) Lyngé.** ORANGE CO.: on *Selaginella bigelovii* in coastal sage scrub, Aliso-Wood Canyon Park, *Riefner & Roberts 90-211* (WIS).

***Coccotrema pocillarium* (Cummings) Brodo.** SONOMA CO.: on soil along coastal bluffs, State Hwy. 1 near Fort Ross, *Riefner 88-77* (COLO, CANL).

***Dirinaria picta* (Swartz) Clém. & Shear.** SONOMA CO.: on rocks along State Hwy. 1 near Fort Ross, *Riefner 88-78* (WIS) & *85-639* (COLO). SAN LUIS OBISPO CO.: on soil in coastal sage scrub at Camarillo Peaks, Morro Bay State Park, *Riefner 92-408* (WIS). VENTURA CO.: on soil and rocks in scrub along Potrero Rd., *Riefner 92-190* (WIS).

***Heterodermia* cf. *galactophylla* (Tuck.) Culb.** MARIN CO.: Pt. Reyes, *Riefner 85-740* (US). ORANGE CO.: on *Quercus* at Aliso-Wood Canyon Park, *Riefner & Roberts 92-20*. SAN LUIS OBISPO CO.: on scrub and chaparral shrubs, Montaña de Oro State Park, *Riefner 89-258*

(WIS); Avila Rd., *Riefner 87-21* (WIS). SANTA BARBARA CO.: on *Quercus* along Constellation Rd., *Riefner 87-235 & 87-285* (WIS). TLC: atranorin and zeorin. Separated from *H. erinacea* (Ach.) Hale by being esorediate and from *H. leucomelos* (L.) Poelt (*H. "leucomelaena"*) by its smaller thallus which lacks salazinic acid (W.L. Culbertson 1966). California *H. galactophylla* has lobes that are generally narrower than in typical material from the SE U.S., and J.W. Thomson (pers. comm.) believes this may turn out to be a new California endemic.

***Leprocaulon subalbicans* (Lamb) Lamb & Ward.** SAN DIEGO CO.: on soil in maritime chaparral, Torrey Pines Reserve, *Riefner 91-171* (WIS); on soil in maritime succulent scrub on Point Loma, *Riefner 91-21* (WIS).

***Muellerella pygmaea* (Körber) D. Hawksw.** ORANGE CO.: lichenicolous on *Aspicilia cinerea*, talus slope on Modjeska Peak, elev. ca. 1500 m, *Riefner 88-190* (WIS).

***Phaeophyscia kairamoi* (Vainio) Moberg.** INYO CO.: on NW-facing cliff, SE side of State Hwy. 267, Death Valley National Monument, elev. 1220 m, *Ryan 14888*. LOS ANGELES CO.: on rock at Land's End, Santa Catalina Island, elev. 20 m, *Ryan 30956*. MONTEREY CO.: on *Quercus*, Arroyo Seco Canyon Campground, Los Padres National Forest, elev. ca. 300 m, *Ryan 26888*. SANTA BARBARA CO.: on rock, along pass on main road SE of Black Mountain, Santa Rosa Island, elev. 240-320 m, *Ryan 31666*. SAN LUIS OBISPO CO.: on shale in Coon Creek Canyon, Montaña de Oro State Park, *Riefner 87-392* (WIS). VENTURA CO.: outcrops in coastal sage scrub near Point Mugu, *Riefner 92-132*.

***Phaeophyscia sciastra* (Ach.) Moberg.** RIVERSIDE CO.: on granitic boulders and cliffs along stream valley near Pinyon Flats on State Hwy. 74, *Riefner 86-63* (US). SHASTA CO.: on rock, along Manzanita Creek next to State Hwy. 44, 1 km W of Lassen Volcanic National Park, elev. 1700 m, *Ryan 11325*. VENTURA CO.: on rock along river canyon at State Hwy. 33 N of Ojai, *Riefner 87-79*.

***Physcia halei* Thomson.** TULARE CO.: on granitic boulders, Jack Flat Campground, State Hwy. 137, *Riefner 88-213* (WIS).

***Physcia subtilis* Degel.** TULARE CO.: on granitic outcrops at Hidden Falls, Mountain Home State Forest, elev. ca. 3000 m, *Riefner 88-225* (WIS).

***Physciella melanchra* (Hue) Essl.** SAN LUIS OBISPO CO.: on andesite outcrop along the marsh at Morro Bay, *Riefner 89-226* (WIS).

***Ramalina peruviana* Ach.** SAN DIEGO CO.: on *Lycium* in scrub at Torrey Pines Reserve, *Riefner 91-167* (WIS);

BAJA CALIFORNIA NORTE, MEXICO: Punta Banda, *Riefner & Bowler 91-118* (BRIU).

Ramalina sinensis Jatta. SANTA BARBARA CO.: on *Quercus douglasii* in open woodland at the Santa Ynez Recreation Area, *Riefner 91-58* (WIS).

Rhizocarpon concentricum (Davies) Beltram. SAN LUIS OBISPO CO.: on shale outcrop in *Pinus muricata* forest near Montaña de Oro State Park, *Riefner 89-252* (WIS).

Rhizocarpon obscuratum (Ach.) Massal. SAN LUIS OBISPO CO.: on shale in fog zone, Montaña de Oro State Park, *Riefner 89-249* (WIS).

Verrucaria mucosa Wahlenb. in Ach. SAN LUIS OBISPO CO.: in the spray zone of the upper littoral, Morro Rock Reserve, *Riefner 93-12* (WIS).

Xanthoparmelia subdecepiens (Vainio) Hale. ORANGE CO.: talus slope on Modjeska Peak, elev. ca. 1500 m, *Riefner 88-185* (US). A few specimens from this population lacked the fatty acid TLC profile of typical material, *Riefner 88-187* (WIS).

Records of Rare, Local, or Interesting Taxa

Acarospora thelococcoides (Nyl.) Zahlbr. VENTURA CO.: on thin soil over outcrops or rocky terrain along the Los Robles Trail, Conejo Mountain Recreation Area, *Riefner 92-111* (WIS).

Restricted to southern California (Fink 1935), and now apparently very rare due to urbanization. Identified by J.W. Thomson and compared with the isotype of *A. pleiospora* Nyl. (a synonym of *A. thelococcoides*; J.W. Thomson, pers. comm.). The spores are many per ascus and spherical, ca. 12 μ m in diameter.

Bryoria pseudocapillaris Brodo & D. Hawksw. SAN LUIS OBISPO CO.: on shrubs in maritime chaparral near Baywood Park, *Riefner 87-140* (CANL) & *87-143a*.

Rare in North America and previously known from Humboldt Co., northern California, to Oregon (Brodo and Hawksworth 1977). Distinguished by the elongate pseudocyphellae which become distinctly sulcate (l. Brodo, pers. comm.).

Bryoria spiralifera Brodo & D. Hawksw. SAN LUIS OBISPO CO.: Baywood Park, *Riefner 87-336* (CANL); Montaña de Oro State Park, *Riefner 87-142*. MONTEREY CO.: near Point Lobos, *Riefner 88-147*. SONOMA CO.: Stewart's Point Rd., *Riefner 88-128*. TLC: norstictic and connorstictic acids, \pm unknown Rf 5-6, \pm atranorin.

Previously documented only from the Samoa Peninsula in Humboldt Co. (Brodo and Hawksworth 1977), and

from the Los Osos Oaks Reserve, San Luis Obispo Co. (Brodo 1986).

Caloplaca bolacina (Tuck.) Herre. RIVERSIDE CO.: on outcrops in *Quercus-Pinus-Calocedrus* forest, elev. ca. 2,200 m, Santa Rosa Mountain, *Riefner 91-155* (WIS).

This population conforms taxonomically to *C. bolacina* as circumscribed by Arup (1992) (identified by J.W. Thomson), but is a new altitude record and ecological zone for the species. Arup (1992) states that *C. bolacina* occurs up to at least 1,600 m, and probably avoids localities with cold winters. We intend to look at this collection more closely in view of the fact that its habitat on the margin of sub-alpine *Abies* forest is characterized by frequent frosts and snow-pack conditions.

Caloplaca bolanderi (Tuck.) Magnusson. LOS ANGELES CO.: on rocks just above the spray zone, Eel Point, San Clemente Island, growing with *C. coralloides*, *Riefner 89-110* (WIS).

Easily identified by the conspicuously colored apothecia and the large spores. *Caloplaca bolanderi* has not been previously reported from southern California, and was not included among the marine and maritime species of *Caloplaca* discussed by Arup (1995b). It is best known in California from inland localities (Sigal 1975).

Caloplaca brattiae W. Weber. SAN LUIS OBISPO CO.: on outcrops along high marsh in Morro Bay estuary, Morro Bay State Park, *Riefner 87-218*; on seashore rocks at Avila Beach, *Riefner 88-257*, and along the San Luis Bay estuary (site report).

These new stations increase the vertical distribution of the species beyond the upper supralittoral zone (Arup (1995a).

Caloplaca chrysophthalma Degel. VENTURA CO.: on bark of *Quercus lobata*, Conejo Mountain Recreation Area, *Riefner 92-101* (WIS).

This inconspicuous taxon has been reported in California only from the San Francisco Bay region (Baltzo 1970). The Ventura Co. collection has fine soredia and a thin, almost invisible thallus that most closely matches typical European material rather than *C. cf. chrysophthalma* as collected and discussed by Weber et al. (1987), which may be an undescribed species.

Caloplaca epithalina Lynge. RIVERSIDE CO.: lichenicolous on *Dimelaena* and *Rhizoplaca* on outcrops near the summit of Santa Rosa Mountain, elev. ca. 2500 m, *Riefner 90-237* (WIS).

Only recently reported for California from the Sierra Nevada (Ryan and Nash 1991).

Caloplaca subpyracella (Nyl.) Zahlbr. SAN DIEGO CO.: on sandstone and sandy soil in maritime scrub and on outcrops above the high-tide limit, Point Loma, *Riefner*

91-20 (WIS). VENTURA CO.: on soil, pebbles, and *Selaginella* in the Conejo Mountain region, *Riefner 92-110* (WIS); on rocks from near the spray zone to sandy soil in coastal sage scrub, Point Mugu, *Riefner 92-133*.

Another species not well-documented in the literature and poorly known with respect to distribution and ecology. It has been considered an inland species of the southern California foothills (Fink 1935, Tucker and Jordan 1978). Although our collections do not extend the known range of the species, they do broaden its ecological tolerance to include the maritime belt of California. *Caloplaca subpyracella* was not included among the littoral species of the genus occurring in North America by Arup (1995b). It is distinguished by 20 x 7 µm spores which have a very narrow septum (J.W. Thomson, pers. comm.)

Cladonia cf. firma Nyl. SAN DIEGO CO.: on sandy soil in maritime chaparral, Torrey Pines Reserve, *Riefner 91-168* (WIS). TLC: atranorin and fumarprotocetraric acid.

Only recently reported from North America (San Luis Obispo Co., CA) by Hammer (1991). *Cladonia cf. firma* was reported by DeBolt and McCune (1993) from Glacier National Park.

Cladonia thiersii Hammer. SAN DIEGO CO.: on sandy soil in maritime chaparral at Torrey Pines Reserve, *Riefner 87-50*. This small colony is apparently the only remaining in southern California since the San Diego Co. population reported by Hammer (1993) was destroyed by prescribed burns. TLC: thamnolic acid and unidentified substances discussed by Hammer (1989).

Cladonia thiersii is otherwise known only from Mendocino Co. to the Point Reyes Peninsula in Marin Co. (Hammer 1989).

Cyphellium brunneum Weber. ORANGE CO.: on sandstone outcrops on ocean bluffs at Niguel Hill, *Riefner & Roberts 91-176* (WIS).

Best known from the Channel Islands (Weber 1967), uncommon along the mainland coast. This is apparently a new record for Orange Co..

Dendrographa leucophaea (Tuck.) Darbish. MONTEREY CO.: on *Pinus radiata* near Point Lobos, *Riefner 88-148*. ORANGE CO.: on *Rhus integrifolia*, San Clemente State Beach, *Riefner 94-501*. LOS ANGELES CO.: San Clemente Island, Eel Point, *Bowler et al. s.n.* SAN LUIS OBISPO CO.: on *Cupressus* at White Point, Morro Bay State Park, *Riefner 89-297* (S), *83-180* (US).

State-endangered according to Hale and Cole (1988, p. 10) who cite the Channel Islands as the known modern range and San Diego Co. north to Monterey Co. as an historical range. Also recently collected on Santa Barbara Island (Bratt 1993) and likely present on other Channel Islands as well. There are numerous forms transitional between the fertile *D. leucophaea* and the

sterile *D. minor* (A. Tehler, pers. comm.) that cannot be easily resolved using traditional keys.

Dimelaena californica (Magnusson) Sheard. SAN LUIS OBISPO CO.: on rocks, Camarillo Peaks, Morro Bay State Park, *Riefner 93-26* (WIS).

A new record for the central coast region. Previously documented only from northern Baja California, Mexico (Sheard 1974), and from the South Coast Ranges of California, where it has been rarely collected, according to Hale and Cole (1988).

Endocarpon subnitescens Nyl. SAN LUIS OBISPO CO.: on soil in coastal sage scrub at Camarillo Peaks, Morro Bay State Park, *Riefner 94-415* (WIS).

Very rare (J.W. Thomson, pers. comm.), recorded only from southern California (Hasse 1913; Fink 1935). Spores are 2 per ascus, strongly muriform, 55 x 23 µm. Hymenial algae are present.

Evernia prunastri (L.) Ach. RIVERSIDE CO.: on chaparral shrubs, San Mateo Wilderness, W slope of the Santa Rosa Plateau, *Riefner 91-109*. SANTA BARBARA CO.: on bark, 0.5 km below pass adjacent to Black Mountain, Santa Rosa Island, elev. 260 m, *Ryan 31409*. TLC: evernic acid.

Although this species is very common and widely distributed, these collections are mentioned because the thalli are distinctly gray, lacking usnic acid. Since the gray thalli are found on sun-lit branches of chaparral shrubs, this is not merely a light-related phenomenon. Such thalli are much less common than the typical yellow-green ones with usnic acid but otherwise are morphologically identical.

Flavopunctelia soredica (Nyl.) Hale. ORANGE CO.: SW of San Juan Loop Trail, State Hwy. 74, *Riefner 84-46* (US); Casper's Wilderness Park, *Riefner 91-5*. RIVERSIDE CO.: Beaumont, *Riefner 94-101*; Ortega Oaks, *Riefner 87-1* (COLO). SAN LUIS OBISPO CO.: Montaña de Oro State Park, *Riefner 87-33* (COLO); Morro Rock Reserve, *Riefner 87-481*.

Rare in the Coast Ranges (Hale and Cole 1988). Collected also on the Santa Rosa Plateau, Riverside Co. (Weber et al. 1987).

Gyalecta herrei Vezda. ORANGE CO.: on rocks, base of Aliso Peak, *Riefner 91-184* (WIS).

Gyalecta herrei, usually on wood, is another species best known north of the San Francisco Bay region (Tucker and Jordan 1978), although it has been reported from the southern California mainland (Hasse 1913) and the Channel Islands (T. Nash, pers. comm.)

Hypogymnia heterophylla Pike. SAN LUIS OBISPO CO.: on *Pinus muricata* branches in fog forest, ca. 300 m, Field Ranch near Montaña de Oro State Park, *Riefner 89-*

256. TLC: atranorin; protocetraric, physodalic, and physodic acids.

Rare on the Pacific coast (Goward 1988), previously documented from Marin Co. north into Oregon (Pike and Hale 1982; Hale and Cole 1988). Locally abundant where summer fogs persist as in the Montaña de Oro-Morro Bay region; the Stewart's Point-Salt Point State Park area in Sonoma Co.: *Riefner 86-182*; Pt. Lobos on the Monterey Peninsula, *Nash 18903* (ASU); and Patrick's Point in Humboldt Co., *Riefner 84-224*.

***Hypogymnia metaphysodes* (Asah.) Rass.** MERCED CO.: on bark, State Hwy. 152, 32 km NNE of Hollister, *Ryan 26657*. SAN LUIS OBISPO CO.: on shrubs at Baywood Park near Morro Bay, *Riefner 88-6* (US, WIS); *Ryan 21943b*.

Common in western inland forests (Goward 1988) but rarely collected in California (Siskiyou and Trinity Cos.: Hale and Cole 1988).

***Hypogymnia mollis* Pike and Hale.** ORANGE CO.: maritime chaparral at Niguel Hill, *Riefner & Roberts 91-181*. RIVERSIDE CO.: San Juan Loop Trail, Ortega Oaks, State Hwy. 74, *Riefner 84-40* (US). SAN LUIS OBISPO CO.: on oaks at Avila Rd. near San Luis Bay, *Riefner 87-15* (COLO); on *Pinus muricata* along ridge at Coon Creek, *Riefner 87-393*; on shrubs in maritime chaparral at Montaña de Oro State Park, *Riefner 87-144*. SANTA BARBARA CO.: on oaks at Point Sal, *Riefner 87-264*; on *Salvia* along the Santa Ynez River, *Riefner 87-405*; on shrubs near Constellation Road, *Riefner 87-223*; on shrubs at Rancho Las Flores near Los Alamos, *Ryan 21906*; ridge road at Saucés Gate, Santa Cruz Island, *Ryan 31504*, and Ragged Mountain, elev. 310-400 m, *Ryan 31551*; Black Mountain, Santa Rosa Island, *Ryan 31392*. SAN DIEGO CO.: Torrey Pines Reserve, *Riefner 86-73* (COLO, US); De Luz Rd., *Riefner 91-82*. TLC: atranorin, physodic acid, trace alectoronic acid, trace unidentified aliphatic compound (A-2, B-3, C-2,3; H + brownish). Specimens submitted to TLC: SAN LUIS OBISPO CO.: *Riefner 87-393* (DUKE) and SANTA BARBARA CO.: *Riefner 90-203* (DUKE).

The Niguel Hill collection is a new county record, the Ortega Oaks collection is only the second report from Riverside Co., and there are no previous records from the Channel Islands (see Pike and Hale 1982; Weber and Bratt 1987; Hale and Cole 1988). Hale and Cole (1988, p. 10) consider this taxon to be State-endangered. Although Pike and Hale (1982) did not see fertile specimens, we did: SAN LUIS OBISPO CO.: Montaña de Oro State Park, *Riefner 86-48* (US). SANTA BARBARA CO.: Harris Grade Rd. near Lompoc, *Riefner 89-398* (WIS). Apothecia are 4-5 mm in diameter and spores 5-8 x 4-5 μm .

***Hypogymnia occidentalis* Pike.** MENDOCINO CO.: on forest trees along U.S. Hwy. 101, ridgetop near

Cummings, *Riefner 85-476* (US); on fenceposts, State Hwy. 128 east of Boonville, *Ryan 22274*. SAN LUIS OBISPO CO.: on *Pinus muricata* branches in fog forest near Montaña de Oro State Park, *Riefner 85-530* (US); on shrubs north of Baywood Park, elev. 25 m, *Ryan 21943b*. SANTA BARBARA CO.: on bark, 0.5 km below pass adjacent to Black Mountain, Santa Rosa Island, *Ryan 31394*; Saucés Gate, Santa Cruz Island, *Ryan 31502* (Channel Island specimens determined by T. Goward). SISKIYOU CO.: on *Pseudotsuga menziesii* along Walker Creek Rd., *Ryan 25710a*; Shackelford Creek Trail ca. 1.6 km from Road 43N21, *Ryan 25317*. TLC: atranorin and physodic acid.

Rather rare from the San Francisco Bay region north to Del Norte Co. (Hale and Cole 1988), but otherwise common in western intermontane forests (Goward 1988).

***Hypogymnia physodes* (L.) Nyl.** SAN LUIS OBISPO CO.: on *Pinus muricata* and shrubs in chaparral along Coon Creek, Montaña de Oro State Park, *Riefner 87-105* (WIS).

Extremely common and widespread in boreal and temperate North America (Hale 1979); in California rather rare from the Santa Cruz Mountains north (Hale and Cole 1988). Reported from Guadalupe Island, Mexico, by Linder (1934) and possibly more widespread in the Pacific southwest than previously thought.

***Hypogymnia tubulosa* (Schaer.) Hav.** SAN LUIS OBISPO CO.: on chaparral shrubs along State Hwy. 46 at Cypress Mountain, *Riefner 85-287* (US); on shrub in *Pinus muricata* forest near Field Ranch, *Riefner 87-348*. SHASTA CO.: on shrubs in mixed forest at Castle Crags State Park, *Riefner 85-287* (US). SONOMA CO.: on rock, along State Hwy. 1 near Fort Ross, *Riefner 86-139*.

Widespread but seldom abundant (Goward 1988), from San Benito Co. north to Humboldt Co. in the North Coast Ranges and the Klamath Mountains (Hale and Cole 1988). It is rare at both localities in San Luis Obispo Co. The Shasta Co. locality is a first report from the Cascade Ranges in California.

***Lecanactis zahlbruckneri* Herre.** SAN LUIS OBISPO CO.: on supralittoral rocks at White Point, Morro Bay State Park, *Riefner 88-247* (WIS).

A maritime species previously reported only from the San Francisco Bay area (Herre 1907, 1910) on the California mainland, and Guadalupe Island in Baja California, Mexico (Egea and Torrente 1992). Spores 3-septate, 15-18 x 6-7 μm , slightly smaller than given by Egea and Torrente; thallus C-.

***Lecanora phryganitis* Tuck.** SAN LUIS OBISPO CO.: high sea cliffs of Morro Rock Reserve, *Riefner 90-66*.

A dwarf fruticose species common on rock outcrops in the fog belt from the San Francisco Bay region north to Sonoma Co. (Ryan 1989). We extend its known range south to San Luis Obispo Co., where it is uncommon on rock and humus.

***Lecanora subcarnea* (Liljebład) Ach.** LOS ANGELES CO.: on rock, ridge above Blue Cavern Point, Santa Catalina Island, *Ryan 30966*. SANTA BARBARA CO.: Cherry Canyon, Santa Rosa Island, *Ryan 31434*; Ridge Trail (?) to Ragged Mountain, Santa Cruz Island, *Ryan 31534*. MARIN CO.: outcrops on coastal bluffs near Mt. Tamalpais, *Riefner 85-721* (COLO).

Rarely cited in the California literature (see Tucker and Jordan 1978). Although Hasse omitted it from his flora (1913), he had earlier reported it from Catalina Island (Hasse 1903). Riefner and Bowler have not found this species during an ongoing study of San Clemente Island. The Mt. Tamalpais collection is a new county record, according to Volk (1963). Disk P+ red, C-; spores 10-14 x 5-8 μm .

***Lecanora rupicola* (L.) Zahlbr.** LOS ANGELES CO.: on ocean bluffs near the Field Station, San Clemente Island, *Riefner & Bowler 89-118*. ORANGE CO.: Aliso-Wood Canyon Park, *Riefner & Roberts 90-214*. RIVERSIDE CO.: San Mateo Wilderness, *Riefner 91-110* (WIS). SAN LUIS OBISPO CO.: Montaña de Oro State Park, *Riefner 410* (annotated by B. Ryan).

Although *L. rupicola* is usually considered a boreal or alpine species (Hasse 1913; Fink 1935), our finds in the southern half of the State are mostly at low elevations. This is another crust with a chalky colored thallus that may be confused with *L. subcarnea*. It is much more common, however, and is easily distinguished by the usually C+ yellowish reaction of the apothecia and the spores 8-15 x 5-9 μm .

***Letharia vulpina* (L.) Hue.** ORANGE CO.: on oaks and among *Cladonia* on outcrops at Aliso-Wood Canyon Park, *Riefner 90-213*.

Not known previously from low elevations on the coast south of the San Francisco Bay region (Hale and Cole 1988).

***Niebla ceruchis* (Ach.) Rundel & Bowler.** SAN DIEGO CO.: near Torrey Pines, *Riefner 86-82*.

Richly represented in herbaria by collections from coastal California and Baja California, Mexico, now apparently extirpated from the southern part of the State, except the Channel Islands, also seriously declining in central California due to destruction of coastal habitat. The Torrey Pines population, apparently the last known from the south-coast mainland, has been eliminated.

***Parmotrema austrosinense* (Zahlbr.) Hale.** SAN LUIS OBISPO CO.: on oaks at Morro Bay State Park, *Riefner 90-84*; on oaks near Arroyo Laguna along State Hwy. 1, *Riefner 89-180* (WIS). SAN DIEGO CO.: San Mateo Creek scrub, *Riefner 94-369*. ORANGE CO.: on oaks on canyon slopes along Aliso Creek, *Riefner & Marsh 92-8*; Buck Gully, *Riefner 91-214*; on oaks, Aliso-Wood Canyon Park, *Riefner & Roberts 90-228*. TLC: atranorin and lecanoric acid.

Rare in Santa Barbara Co. with an historical range extending south to Los Angeles Co., considered State-endangered (Hale and Cole 1988, p. 10).

***Parmotrema hypoleucinum* (Steiner) Hale.** LOS ANGELES CO.: on bark, 0.8 km NW of Catalina Airfield, Santa Catalina Island, *Ryan 30905*. SAN DIEGO CO.: in maritime chaparral at Torrey Pines Reserve, *Riefner 86-72* (COLO, US) & *87-47* (US); on shrubs, Carlsbad, east Agua Hedionda Lagoon, *Riefner 91-175*. SAN LUIS OBISPO CO.: in maritime scrub at Baywood Park, *Riefner 85-534* (US); San Luis Bay, *Riefner 87-19* (COLO); on shrubs at Avila Beach, *Riefner 87-19*. SANTA BARBARA CO.: Santa Lucia Canyon, *Riefner 87-272*; Constellation Rd. and U.S. Hwy. 101, *Riefner 87-306*; on *Quercus*, road from Sierra Pablo to East Point, Santa Rosa Island, *Ryan 31139*; on bark, pass along main road just SE of Black Mountain, Santa Rosa Island, *Ryan 31538*. ORANGE CO.: coastal canyon at San Clemente State Beach, *Riefner 94-378*.

Hale and Cole (1988) give this taxon as occurring from San Diego to San Luis Obispo Counties and consider it State-endangered. We add several extant populations where it is often locally abundant.

***Phaeophyscia decolor* (Kashiw.) Essl.** ALPINE CO.: on granite, Clark Fork Road, Carson-Iceberg Wilderness, elev. 2000 m, *Ryan 24658, 24660*. LOS ANGELES CO.: Eagles Roost Sand Shed, State Hwy. 2, elev. 1975 m, *Ryan 26280c*. MADERA CO.: near Rock Creek Campground, Minarets Rd., Sierra National Forest, elev. 1320 m, *Ryan 32155*. SAN DIEGO CO.: Palomar Divide Truck Trail, Mission Indian Reserve, ca. 3 km SSE of Eagle Crag, elev. 1175 m, *Ryan 25961*. SHASTA CO.: Manzanita Creek, State Hwy. 44, 1 km W of Lassen Volcanic National Park, elev. ca. 1700 m, *Ryan 11353*. SISKIYOU CO.: Shackleford Creek, Marble Mountain Wilderness, elev. 1325-1450 m, *Ryan 25240*. TULARE CO.: on granitic outcrops in mixed conifer forest, elev. ca. 2800 m, Mt. Whitney, *Riefner 84-50* (US). TUOLOMNE CO.: Herring Creek Road, Stanislaus National Forest, elev. 2100 m, *Ryan 24509*.

This easily overlooked species is rare in Mariposa and Alpine Cos., according to Hale and Cole (1988).

Physcia americana G. K. Merr. in A. Evans & Meyrow. (*P. tribacoides* auct. non Nyl.). SAN LUIS OBISPO CO.: on oaks near Morro Bay, *Riefner 90-70* (WIS).

Not included by Hale and Cole (1988), reported by Thomson (1963) from only one locality in California. The soredia are not on isidia but are capitate (*P. caesia* group), and the lower side of the thallus is paraplectenchymatous (J.W. Thomson, pers. comm.).

Physcia tenella (Scop.) DC. in Lam. & DC. var. *marina* (Nyl.) D. Hawks. SAN LUIS OBISPO CO.: on outcrops and cliffs above the spray zone at Morro Rock Reserve, *Riefner 89-231* (WIS). TLC: atranorin and zeorin.

This maritime variety previously was known in California only from Santa Catalina Island (Thomson 1963; Moberg 1977).

Platismatia stenophylla (Tuck.) Culb. and C. Culb. SHASTA CO.: common on conifers along Long Hay Flat Drive off State Hwy. 44, *Riefner 85-649*.

Rather rare from the Santa Cruz Mountains northward in the North Coast Ranges (Hale and Cole 1988). This is the first report from the Cascade Ranges.

Protoparmelia badia (Hoffm.) Hafellner (*Lecanora badia* [Hoffm.] Ach.). EL DORADO CO.: on rock, Lost Lake, Sugar Pine State Park, 6.5 km WSW of Meeks Bay, elev. 2250 m, *Ryan 23587*. TULARE CO.: bank of the Kaweah River SW of Sequoia National Park, State Hwy. 198, elev. 300 m, *Ryan 11285*. VENTURA CO.: on outcrops in coastal sage scrub near Pt. Mugu, *Riefner 92-129* (WIS).

Previously reported in California only from the Eastern Brook Lakes Watershed (Ryan and Nash 1991).

Pseudephebe pubescens (L.) M. Choisy. RIVERSIDE CO.: outcrops on Santa Rosa Mountain, elev. ca. 2500 m, *Riefner 88-192*, growing with *Sporastatia*.

This well-known alpine species has not been documented previously from southern California (Hale and Cole 1988). It is to be expected on other high mountains in the southern part of the State.

Punctelia borreri (Sm.) Krog. LOS ANGELES CO.: on oaks near the Field Station, San Clemente Island, *Riefner & Bowler 89-114* (WIS). SAN LUIS OBISPO CO.: Morro Rock Reserve, *Riefner 85-230* (US); on *Umbellularia* and on rocks along State Hwy. 46, *Riefner 86-98* (COLO, US); State Hwy. 1 opposite Hearst Castle, San Simeon, *Ryan 11199*. MARIN CO.: coastal outcrops near Mt. Tamalpais, *Riefner 84-76* (US).

Previously collected only in Santa Barbara Co. from oak trees (Hale and Cole 1988).

Punctelia punctilla (Hale) Krog. VENTURA CO.: outcrops on Conejo Mountain, *Riefner 92-53*.

Previously known in North America only from the Point Mugu-Long Grade Canyon area of Ventura Co. It was identified by the late Mason Hale, Jr. (Riefner 1989).

Ramalina fastigiata (Pers.) Ach. LOS ANGELES CO.: on oak branches near the Field Station, San Clemente Island, *Riefner & Bowler 89-103*.

This Old World taxon was only recently reported for North America from San Luis Obispo Co. (Riefner 1990).

Ramalina fraxinea (L.) Ach. LOS ANGELES CO.: Santa Monica Mountains, *Hasse s.n.* (NY). SAN LUIS OBISPO CO.: on large oaks at Camarillo Peaks, Morro Bay State Park, *Riefner 92-411*. TLC: no substances.

An Old World taxon repeatedly cited from California (Tucker and Jordan 1978). However, during our studies of the genus *Ramalina* we have found this name to be commonly misapplied. In California *R. fraxinea* is apparently coastal and rare. A key to the fertile species of *Ramalina* in California is in preparation by the senior authors.

Ramalina pollinaria (Westr.) Ach. SAN DIEGO CO.: San Diego, *Palmer 276e* (DH), *Farlow s.n.* (FH). ORANGE CO.: Aliso and Wood Canyon Park, *Riefner & Roberts 217*. BAJA CALIFORNIA NORTE, MEXICO: Punta Banda, *Riefner & Bowler 92-434*. TLC: evernic, trace lecanoric, probable trace obtusatic, and usnic (\pm) acids.

Known from Santa Barbara Co. to Humboldt Co. (Hale and Cole 1988). Considered a misidentification of *R. evernioides* by Tucker and Jordan (1979), it was not previously known from extreme southern California (Hasse 1913), or from Baja California, Mexico. *Ramalina pollinaria* is common in coastal central and northern California. Treatments of the numerous problematic and confusing sorediate species of California *Ramalina* are in preparation by Riefner and Bowler.

Roccella babingtonii Mont. ORANGE CO.: on rock, ocean cliff above the spray zone, Abalone Point, *Riefner 95-356*.

Hale and Cole (1988) considered this species to be State-endangered and extant only in San Diego Co. and the Channel Islands. It is very rare at the Orange Co. locality.

Roccella fimbriata Darbish. SAN LUIS OBISPO CO.: on rock above the spray zone at White Point, Morro Bay State Park, *Riefner 85-513* (COLO).

Very rare in the Morro Bay region and considered State-endangered by Hale and Cole (1988, p. 10). A new record for the central coast.

Roccellina franciscana (Zahlbr. ex Herre) Follm. in Huneck & Follm. SAN LUIS OBISPO CO.: on rocks at Morro Rock Reserve, *Riefner 87-205* (COLO, WIS); on rocks at White Point, Morro Bay State Park, *Riefner 88-246* (WIS).

Best known from the area between Monterey and San Francisco Bay where it is locally common on cypress bark, and apparently rare on rock (Herre 1907; Tehler 1983). In the Morro Bay region, however, we have found it to be rare on bark and common on rock in the supralittoral zone, where it forms small cushions.

Schizopelte californica Th. Fr. (*Combea californica* [Th. Fr.] Follm. & Geyer). LOS ANGELES CO.: Pt. Dune, near Malibu, *Halling 613* (ASU, SFSU). MONTEREY CO.: Willow Creek, *Rundel s.n.* (Herb. Rundel). SAN LUIS OBISPO CO.: White Point at Morro Bay State Park, *Riefner 85-507*; Cayucos, *Riefner 89-70*; Morro Rock Reserve, *Riefner 87-193* (COLO, US). ORANGE CO.: Abalone Point, *Riefner 90-137*; South Laguna, *Nash 10300* (ASU).

This unusual fog zone lichen, still abundant on the Channel Islands but rare on the mainland, was apparently thought by Hale and Cole (1988) to be only in Los Angeles and Ventura Cos. The Orange Co. collection appears to be a rare find for the south-coast mainland (Orcutt 1907; Hasse 1913). Tehler (1993) believes that this species should not be placed in *Combea*.

Sulcaria isidifera Brodo. SAN LUIS OBISPO CO.: maritime chaparral at Montaña de Oro State Park, *Riefner 85-305* (COLO), *Riefner 86-401* (US); on shrubs in *Pinus muricata* forest at Field Ranch, *Riefner 87-379*; Morro Bay State Park, *Riefner 87-438*; Baywood Park, *Riefner 88-2, 88-3* (CANL). Rancho Cañada de Los Osos SW of Calle Cordoniz Rd., Los Osos, *Riefner 90-93*.

This handsome San Luis Obispo Co. endemic was described and previously known only from Los Osos Oaks (Brodo 1986). During the senior author's study of the Morro Bay region it was found to be present also at Morro Bay State Park, Baywood Park, the Field Ranch, and most abundant at Montaña de Oro State Park, all within a few km. It is easily overlooked since it occurs most commonly on the inner branches of maritime chaparral shrubs. Fertile specimens have not been seen.

Teloschistes californicus Sipman. LOS ANGELES CO.: Eel Point, San Clemente Island, *Bowler s.n.*; *Mautz et al. s.n.* SANTA BARBARA CO.: on shrubs in unnamed canyon W of Bee Canyon, Santa Rosa Island, *Ryan 31078*.

Recently described from California and Baja California, Mexico (Sipman 1993). We add San Clemente Island to its known distribution. Villous, sorediate specimens previously identified as *T. villosus* (Ach.) Norm. belong to this taxon (Sipman 1993). *Teloschistes californicus* was reported by Bratt (1993) (as *T. villosus*) from Santa Barbara Island. The genus *Teloschistes* in the California Floristic Province is currently being revised by Riefner and Bowler.

Teloschistes exilis (Michaux) Vainio. MARIN CO.: on dead wood, Copper Mine Gulch, elev. 300 m, *D.M. Wright 3616*; on *Quercus wislizenii* var. *frutescens*, McCurdy Trail, Bolinas Ridge, elev. 240 m, *D.M. Wright 3618* (Herb. Wright). RIVERSIDE CO.: chaparral, Tenaja Rd., Santa Rosa Plateau, photo and site report, *Riefner 1993*. SAN LUIS OBISPO CO.: near Cerro Alto State Park, *Riefner 85-690* (US); Montaña de Oro State Park, *Riefner 86-24*.

Considered by Hale and Cole (1988) to be very rare and State-endangered, previously reported from the Santa Cruz Mountains and the Channel Islands. Observed in Marin Co. also at Stewart Point on Inverness Ridge and on the Bolinas-Fairfax Rd., mostly on *Quercus*; all populations within a radius of just 2 km (D. Wright, pers. comm.). We also add the following historical localities to its former range: LOS ANGELES CO.: Pasadena, *Kenney s.n.*, collected ca. 1893 (LAM-formerly in the RSA collection); Claremont, *J.M.J. s.n.*, collected ca. 1916 (LAM-formerly in RSA).

Teloschistes flavicans (Sw.) Norm. MARIN CO.: on moss-covered outcrops near Mt. Tamalpais, *Riefner 83-305* (US). SANTA BARBARA CO.: Point Sal, *Riefner 87-263* (US). SAN LUIS OBISPO CO.: Montaña de Oro State Park, *Riefner 87-354* (COLO); State Hwy. 46 near Cypress Mountain, *Riefner 85-232*.

Rare and State-endangered, from Santa Barbara Co. and the Channel Islands north to Marin Co. with an historical range including San Diego and Sonoma Cos. We add the following historical localities: LOS ANGELES CO.: Santa Monica Range, *Hasse s.n.* (LAM-formerly in RSA). MARIN CO.: Mill Valley, *Herre s.n.*, ca. 1930 (LAM-formerly in RSA). SAN MATEO CO.: Pilarcitos Creek Canyon, *Herre s.n.*, two collections, 1942 and 1957 (LAM-formerly in RSA).

Thelomma californicum (Tuck.) Tibell. ORANGE CO.: coastal outcrops at Laguna Crestline, Laguna Beach, *Riefner & Bowler 91-207*.

This beautifully radiate crust was previously documented only from the central coast (Tibell 1976; Tucker and Jordan 1978; Weber 1967).

Umbilicaria krascheninnikovii (Savicz) Zahlbr. RIVERSIDE CO.: on outcrops near the summit of Santa Rosa Mountain, elev. ca. 2500 m, *Riefner 86-313* (COLO).

Rare, previously known from Santa Barbara, Tehama, and Glenn Cos. in the Coast Ranges and in Siskiyou and Modoc Cos. (Hale and Cole 1988). Not included in the lichen flora of southern California by Hasse (1913).

Usnea californica Herre. SAN LUIS OBISPO CO.: on *Pinus muricata* near the Field Ranch, *Riefner 87-328* (WIS).

This large pendulous species is well-known from the Santa Cruz Peninsula (Herre 1907) north to Mendocino

Co. (Malachowski 1975), but apparently has not been previously reported from the south central coast.

Usnea mutabilis Stirton. LOS ANGELES CO.: on bark, 0.8 km NW of Catalina airfield, Santa Catalina Island, *Ryan 30908*. SAN DIEGO CO.: on *Lycium* in maritime chaparral at Torrey Pines Reserve, *Riefner 91-173* (UC).

Not known to have been collected from the mainland more than once or twice after it was reported from San Diego by Motyka (1936-38).

Xanthoparmelia angustiphylla (Gyelnik) Hale. SAN DIEGO CO.: on pebbles and rocks in maritime scrub at Torrey Pines Reserve, *Riefner 87-46* (COLO, US); SAN LUIS OBISPO CO.: on shale along Coon Creek near the Field Ranch, *Riefner 88-47*.

Rare, previously reported only from Siskiyou Co. (Hale and Cole 1988). It has been misidentified as *X. hyposila* (Müll. Arg.) Hale (Hale 1988).

Xanthoparmelia californica Hale. SAN LUIS OBISPO CO.: on outcrops in open scrub at Camarillo Peaks, Morro Bay State Park, *Riefner 92-423*. TLC: norstictic acid.

Rare, previously collected only from Santa Barbara and Sacramento Cos. (Hale and Cole 1988).

Xanthoparmelia mougeotii (Schaerer ex D. Dietr.) Hale. SAN LUIS OBISPO CO.: on shale outcrops in the fog zone of Coon Creek canyon at Montaña de Oro State Park, *Riefner 89-247* (WIS). TLC: stictic, norstictic, and usnic acids.

This inconspicuous sorediate species was only recently discovered in Humboldt, Siskiyou, and Plumas Cos. in northern California (Hale and Cole 1988).

Xanthoria ramulosa (Tuck.) Herre. SAN LUIS OBISPO CO.: maritime chaparral at Baywood Park, *Riefner 88-8*; maritime chaparral at Montaña de Oro State Park, *Riefner 90-58* (WIS).

Very rare on shrubs along the southern California coast (Hale and Cole 1988).

Unidentified Taxa

The following taxa remain unidentified despite consultation with experts and may be new. These are only a few of the many problematic taxa occurring in California. For example, species of the ubiquitous genera *Aspicilia* and *Lecidea s.l.* are presently almost impossible to identify except for a few distinctive species. We encourage other workers in the genera listed below to request loans of material for further study.

Bryoria sp. SAN LUIS OBISPO CO.: on *Pinus muricata* at Montaña de Oro State Park, *Riefner 88-236* (CANL).

SONOMA CO.: on *Pinus* at Salt Point, *Riefner 88-105*. TLC: norstictic and connorstictic acids. This robust species is undoubtedly a member of the *Implexae*, closely related to the European *B. kuemmerleana* and the North American *B. spiralifera*; it is not the former considering its very uniform branches that are not flattened or twisted, its long, spiralling pseudocyphellae, and its color (l. Brodo, pers. comm.). *Bryoria spiralifera* is much more slender and is on exposed shrubs as well as trees, while this mystifying taxon (filed as *B. cf. kuemmerleana* at CANL) grows only high in the canopy of coastal conifers.

Hyperphyscia sp. RIVERSIDE CO.: on outcrops along the Alessandro Trail off Bautista Rd. E of Hemet, *Riefner 90-139* (WIS). TLC: no substances. Fertile material of this saxicolous species has not been previously collected. The apothecia are lecanorine, and the spores are brown, 2-celled, and slightly shorter than in *H. adglutinata*, although these are not completely mature (J.W. Thomson, pers. comm.). Most saxicolous specimens resembling a small, slender-lobed, rosetiform *Physcia* have been placed as *Lecanora demissa* (Flot.) Zahlbr., a central European taxon with simple, colorless spores (Weber et al. 1987). This material appears to be a large complex with easily confused morphologies that range from green to pruinose. Dull gray specimens may include authentic *L. demissa*.

Lecanactis sp. SAN DIEGO CO.: on the trunk of *Quercus dumosa* at Torrey Pines Reserve, *Riefner 92-90* (WIS). Differs from *L. lyncea* by the strongly acicular, many-celled spores, and the more open, expanded apothecia (J.W. Thomson, pers. comm.).

Pertusaria sp. SAN LUIS OBISPO CO.: supralittoral outcrops at White Point, Morro Bay State Park, *Riefner 86-27* (COLO); *Riefner 87-214* (SBM); *Riefner 89-225* (WIS). TLC: norstictic and connorstictic acids. Possibly undescribed (J.W. Thomson, pers. comm.), not treated by Dibben (1980). Spores simple, trimmed (Dibben 1980, fig. 4), 1-2 per ascus, 105-112 x 30-45 μ m, with thick, single walls.

(?) *Roccella* sp. SAN LUIS OBISPO CO.: on shale cliffs in fog zone at Coon Creek, Montaña de Oro State Park, *Riefner 88-260* (SBM, S); on rocks along Morro Bay at White Point, Morro Bay State Park, *Riefner 85-512* (COLO); *Riefner 88-157* (WIS); Morro Bay State Park along marsh, *Riefner 88-261* (DUKE); beneath ledges on sea cliffs of Morro Rock Reserve, *Riefner 93-6* (WIS); *Riefner 87-478* (COLO). TLC: 2-O-methylperlatolic, trace confluent, gyrophoric, and lecanoric acids, and an unidentified aliphatic compound (A-5, B-3, C-5, H+ brownish).

This bizarre sterile esorediate lichen is locally abundant on rocks above the spray zone from Morro Rock south to the Montaña de Oro-Field Ranch area. It has been

referred also to *Darbshirella* and *Reinkella*, and was even thought to be a sickly *Dendrographa minor*, with which it is a common associate. Dr. J.W. Thomson believes it might be placed in *Roccella* due to the arrangement of the cortical hyphae, which are oriented perpendicular to the upper surface. The lecanoric acid and other secondary products eliminate *Dendrographa minor* as a possibility. The thallus readily fragments upon drying, making it an ideal candidate for avian dispersal.

(?) *Schizopelte* sp. SAN LUIS OBISPO CO.: sheltered ledges at White Point, Morro Bay State Park, Riefner 87-115; overhangs in cliffs at Morro Rock Reserve, Riefner 89-47 (ASU, DUKE). BAJA CALIFORNIA NORTE, MEXICO: Punta Banda, Riefner & Bowler 92-426 (ASU). TLC: schizopeltic acid, erythrin, and a series of 6-7 unidentified aliphatic compounds, H+ brownish. The brown, verrucose spores and the presence of erythrin and schizopeltic acid indicate a relationship with *Schizopelte* (A. Tehler, pers. comm.). This interesting crustose species forms subfruticose mounds in the center of the thallus. It is locally common on rock above the ocean spray limit in the Morro Bay region.

Usnea sp. SONOMA CO.: on oak and conifer branches in coastal woodland near Jenner, Riefner 86-174 (WIS). The curious tuberculae may denote an undescribed species; otherwise, this material seems to fit *U. occidentalis* Mot. (J.W. Thomson, pers. comm.).

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October Field Trip to Kyburz, El Dorado County

During the course of the afternoon and evening of October 13, fifteen CALS members found their way to the Sierra Nevada community of Kyburz and from there to the nearby cabin Herb Saylor had so kindly offered us as a field trip headquarters. This was on National Forest land, and the cabin was a gem dating back to the thirties.

From there we took off after breakfast on Saturday. Not only was Herb a genial host, but he knows the area well and has led many mushroom forays there as well as serving as guide to lichenologists.

Our first stop was at the Eagle Rock Picnic Area on Highway 50 just east of Kyburz. Among the alders (*Alnus* sp.), White Firs (*Abies concolor*), Incense Cedars (*Calocedrus decurrens*), Sugar Pines (*Pinus lambertiana*), and dogwood (*Cornus* sp.) interspersed with boulders we collected *Peltigera*, *Buellia*, *Acarospora*, *Rhizocarpon*, *Parmelia*, and *Ochrolechia*.

From there we proceeded southeast on Silver Fork Road to the site of a large burn dating from 1971. Some crustose lichens, such as a 10 cm *Lecanora*, were doing well on boulders well within the burn area. Ponderosa Pine (*Pinus ponderosa*) predominated here with oaks across the road. Lichens collected from the area included *Bacidia*, *Buellia*, *Tuckermannopsis*, *Melanelia*, and *Physconia*.

We continued on Silver Fork Road, turning on Road 71 to Hay Flat, an area at 7200 feet elevation across the road from an aspen grove. Here we had lunch.

The best collecting of the day was at our last stop at Packsaddle Pass at 7100 feet on Road 71 northwest of Hay Flat. Rocks there were volcanic aggregates or breccia, and the trees were mostly White Pine (*Pinus monticola*). West-facing rocks were well covered with lichens, whereas south-facing boulders were essentially bare. Collections made here included *Umbilicaria* and *Acarospora*.

Evening found the group back at the cabin. Following an informational meeting and happy hour, Barbara Lachelt and Winona Kondolf served a delicious lamb stew accompanied by salad and followed by cookies. As there was no energy left, not even for celebrating our busy and productive day, some members returned home and those remaining retired soon after.

Doell, Tucker, Bratt: Sierran Field Trip and List

Next morning's program consisted of collecting in the vicinity of the cabin, where we found *Evernia*, *Lecanora*, *Bryoria*, *Melanelia*, and *Rinodina*.

Weather, lichens, food, lodging, and company were all outstanding, and the field trip was declared a success. Thank you, Herb Saylor.

Janet Doell

Collections Made on the Kyburz Field Trip by S. Tucker and C. Bratt (142+ collections, ca. 74 species).

Sites: 1. Eagle Rock Picnic Area; 2. Burn area on Silver Fork Road; 3. Hay Flat; 4. Packsaddle Pass; 5. Vicinity of Saylor cabin near Kyburz.

Acarospora bullata Anzi 4
Acarospora fuscata (Nyl.) Arn. 2
Ahtiana sphaerospora (Ach.) Goward 3
Aspicilia caesiocinerea (Nyl.) Arn. 1
Aspicilia sp. 1: 2, 4
Bryoria fremontii (Tuck.) Brodo & D. Hawksw. 5
Buellia punctata (Hoffm.) Mass. 4
Caloplaca cerina (Ehrh. ex Hedw.) Th. Fr. 1, 5
Caloplaca cf. *ferruginea* (Huds.) Th. Fr. 4
Candelariella aurella (Hoffm.) Zahlbr. 4, 5
Candelariella vitellina (Hoffm.) Müll. Arg., on rock 2, 4
Candelariella sp. on bark 3
Cladonia - 2 spp. 1, 5
Dermatocarpon miniatum (L.) Mann 2, 4
Diploschistes scruposus (Schreb.) Norm. 2
Esslingeriana idahoensis (Essl.) Hale & Lai 5
Evernia prunastri (L.) Ach. 5
Hypocenomyce scalaris (Ach. ex Lijebblad) M. Choisy 1
Hypogymnia enteromorpha (Ach.) Nyl. 5
Hypogymnia imshaugii Krog 1, 2, 4, 5
Koerberia sonomensis (Tuck.) Henss. 1
Lecanora caesiocinerea Ach. ssp. *merrillii* Imsh. & Brodo 5
Lecanora horiza (Ach.) Lindsay 1
Lecanora pacifica Tuck. 3, 5
Lecanora sierrae Ryan 4
Lecidea atrobrunnea (Ramond in Lam. & DC.) Schaer. 1, 2, 4
Lecidella euphorea (Flörke) Hertel 1, 3, 5
Leproloma cf. *membranaceum* (Dicks.) Vain. 1
Leptochidium albociliatum (Desmaz.) M. Choisy 2
Leptogium californicum Tuck. 1
Leptogium lichenoides (L.) Zahlbr. 2
Leptogium tenuissimum (Dicks.) Koerber 5
Letharia columbiana (Nutt.) Thoms. 4
Letharia vulpina (L.) Hue 2, 3, 5
Megaspora verrucosa (Ach.) Hafellner & V. Wirth 5
Melanelia exasperatula (Nyl.) Essl. 3
Melanelia incolorata (Parr.) Essl. (*M. elegantula* [Zahlbr.] Essl.) 3
Melanelia subelegantula (Essl.) Essl. 1

Melanelia subolivacea (Nyl. in Hasse) Essl. 1, 3, 4, 5
Melanelia sp. 3
Nephroma helveticum Ach. 1
Ochrolechia mexicana Vain. 1
Ochrolechia subpallescens Vers. 5
Parmelia saxatilis (L.) Ach. 1, 2, 5
Parmelia sulcata Taylor 1
Parmeliella testacea P.M. Jørg. 2, 5
Peltigera canina (L.) Willd. 1, 2
Peltigera collina (Ach.) Schrad. 1, 5
Pertusaria sp., on bark 1, 5
Physcia aipolia (Ehrh. ex Humb.) Fűrnr. 1
Physcia albinea (Ach.) Nyl. 2
Physcia callosa Nyl. 1, 2
Physconia americana Essl. 1, 5
Physconia detersa (Nyl.) Poelt 1, 5
Physconia enteroxantha (Nyl.) Poelt 1, 5
Platismatia glauca (L.) Culb. & C. Culb. 1, 5
Platismatia cf. *stenophylla* (Tuck.) Culb. & C. Culb. 5
Psora nipponica (Zahlbr.) G. Schneid. 2
Ramalina farinacea (L.) Ach. 5
Rhizocarpon geographicum (L.) DC. 1
Rhizoplaca melanophthalma (DC. in Lam. & DC.) Leuck. & Poelt 4
Rinodina sp., on rock 2
Rinodina sp., on bark 1, 3, 5
Tuckermannopsis chlorophylla (Willd. in Humb.) Hale 1
Tuckermannopsis ciliaris (Ach.) Gyeln. 5
Tuckermannopsis merrillii (DR.) Hale 2, 5
Tuckermannopsis platyphylla (Tuck.) Hale 1, 2, 5
Umbilicaria hyperborea (Ach.) Hoffm. 4
Umbilicaria phaea Tuck. 2
Umbilicaria torrefacta (Lightf.) Schrad. 2
Usnea sp. 1, 5
Sterile crust 2, 5

Shirley C. Tucker and Charis C. Bratt

**CALS Field Trip of July 16, 1995
to San Bruno Mountain, San Mateo County**

This field trip on San Bruno Mountain just south of San Francisco was led by David Schooley, member of Bay Area Land Watch, long time guide to the mountain, and a new member of CALS. Present were Doris Baltzo, Charis Bratt, Bill Hill, Barbara Lachelt, Marguerite Longtin and her children, Franchesca and Rene, Mikki McGee, Bob Stewart, and Bob and Pat West.

The mountain, which is a plant island, has many niches with 542 vascular plant species in 3000 acres (1200 ha.) (McClintock, Knight, and Fahy 1968), such that different habitats interdigitate and intergrade: Franciscan dune scrub, montane vegetation, Californian Grassland, and Coast Range scrub-forest can be found all within a short distance.

The first stop on the way up was an unscheduled one near the Mars-scape of radio dishes just under the summit at 1314 feet. From the parking lot we went down onto the stretch of Main Ridge Trail that runs between the Radio Towers and the steep, north-facing headwall of Devil's Arroyo. Within minutes, the group was strung out over hundreds of yards of trail, one bunch examining crustose and squamulose lichens at the edge of the parking lot, while others became engrossed among the windswept, *Parmotrema*-covered Coyote Bush, *Baccharis pilularis*.

The summit area proved to be very rich. We never really got off of it. We explored Fog Zone Coastal Scrub and stony ridge areas, both windswept and protected. The accompanying list of finds is partial and provisional: much of the material has not been identified to species. Among the *Parmotrema* was a variety of lichens of all habits. *Cladonia* was everywhere. But, as Charis pointed out, the crustose lichens were the show stoppers. They were everywhere, in quantity and variety. In addition to the species listed below, Charis reported *Caloplaca californica* Zahlbr. from an unspecified spot.

Many of the group did not explore the area of greatest interest to me: the windswept chaparral-boulder grassland on the south slope (Sage Canyon Ridge), where some very interesting lichens were to be found among the Poison Oak, *Toxicodendron diversilobum*, and Coyote Bush. Instead, they picnicked in the parking lot, directly overlooking the very steep headwall of Poison Oak Ravine (the names of some of the arroyos and ravines suggest why this small and contrary mountain

has been much left alone). They were tired from the unscheduled examination of "prime lichen habitat" on Kamchatka Point (Loop Trail in the list.) This area had been passed over by myself as rocky and uninteresting.

After lunch, the majority of the group went their way, while David led Bill Hill and myself through another steep canyon loaded with lichens, Bay, *Umbellularia californica*, Coast Live Oak, *Quercus agrifolia*, Ivy-leaved Cherry, *Prunus ilicifolia*, and a bit too much Poison Oak (I got a bad dose of it.)

The head ranger of the Park was pleased to receive the preliminary checklist, and passed it on to the County Commissioner of Ecology. It was desired data. I believe we will be welcome in the future, and I will be happy to guide others up on the hill by special arrangement. Collecting permits are needed.

It is too bad that the lichens were not their usual best on fogless 16 July. There is often fog on the mountain, especially around the full and new moons, and I and the lichens like the fog. Give me a call, if you are interested in going up there: 415-467-5285.

Mikki McGee

Reference cited:

McClintock, E., W. Knight, and N. Fahy. 1968. A flora of the San Bruno Mountains, San Mateo County, California. *Proceedings of the California Academy of Sciences, Series IV*, 32(20):587-677.

SAN BRUNO MOUNTAIN PARK

	ROAD CUT	DEVIL'S ARROYO	LOOP TRAIL	SAGE RAVINE
<i>Aspicilia</i> sp.			?	?
<i>Buellia halonia</i> (Ach.) Tuck.	?	x	x	x
<i>Buellia</i> sp.	?	x	x	x
<i>Caloplaca</i> sp. (on detritus)				x
<i>Candelariella</i> sp.		x		
<i>Cladonia cervicornis</i> (Ach.) Flotow ssp. <i>verticillata</i> (Hoffm.) Ahti			x	x
<i>Cladonia fimbriata</i> (L.) Fr.		x		
<i>Cladonia furcata</i> (Huds.) Schrader		x		
<i>Cladonia scabriuscula</i> (Delise) Nyl.		x		
<i>Collema furfuraceum</i> (Arnold) Du Rietz				x
<i>Dimelaena radiata</i> (Tuck.) Hale & Culb.	x	x	x	x
<i>Diploschistes muscorum</i> (Scop.) R. Sant.		x		
<i>Diploschistes scruposus</i> (Schreber) Norman	x	?	x	x
<i>Diploschistes</i> sp.	?	x		x
<i>Endocarpon</i> sp.		x		
<i>Flavopunctelia flaventior</i> (Stirton) Hale		x	x	x
<i>Heterodermia leucomelos</i> (L.) Poelt		x		x
<i>Hypogymnia</i> sp.				x
<i>Lecanora pinguis</i> Tuck.			x	x

McGee: San Bruno Mountain

SAN BRUNO MOUNTAIN PARK	ROAD CUT	DEVIL'S ARROYO	LOOP TRAIL	SAGE RAVINE
<i>Lecidea</i> sp.			x	
<i>Lecidella subincongrua</i> (Nyl.) Hertel & Leuck. var. <i>elaeochromoides</i> (Nyl.) Hertel & Leuck.			x	x
<i>Lepraria</i> sp.	x	x	x	x
<i>Leptogium</i> sp.			x	
<i>Melanelia glabra</i> (Schæerer) Essl.		?	x	
<i>Nephroma laevigatum</i> Ach.				x
<i>Niebla combeoides</i> (Nyl.) Rundel & Bowler				x
<i>Niebla homalea</i> (Ach.) Rundel & Bowler			x	x
<i>Niebla</i> sp. (?)			x	x
<i>Pannaria rubiginosa</i> (Ach.) Bory				x
<i>Parmotrema chinense</i> (Osbeck) Hale & Ahti		x	x	x
<i>Pertusaria californica</i> Dibben			x	x
<i>Pertusaria flavicunda</i> Tuck.			x	x
<i>Pertusaria</i> sp.			x	x
<i>Physcia callosa</i> Nyl.	x	x		
<i>Physcia tenella</i> (Scop.) DC.	x			
<i>Punctelia</i> sp.				x
<i>Rhizocarpon geographicum</i> (L.) DC.			x	x
<i>Rhizocarpon</i> sp.	x	x	x	x
<i>Rinodina</i> sp.	x			
<i>Sticta limbata</i> (Sm.) Ach.		?	x	x
<i>Teloschistes flavicans</i> (Swartz) Norman		x		x
<i>Usnea californica</i> Herre		x		?
<i>Usnea rubicunda</i> Stirton		x		x
<i>Usnea wirthii</i> Clerc		x		?
<i>Usnea</i> sp.		x	x	x
<i>Verrucaria</i> sp.	?	x	x	x
<i>Xanthoparmelia cumberlandia</i> (Gyelnik) Hale	x	?	?	x
<i>Xanthoparmelia mexicana</i> (Gyelnik) Hale	x	?	?	x
<i>Xanthoria candelaria</i> (L.) Th. Fr.			x	x
<i>Xanthoria polycarpa</i> (Hoffm.) Rieber		x	x	x

Book Review

Bruce McCune and Trevor Goward. *Macrolichens of the Northern Rocky Mountains*. Mad River Press, Eureka, California. 1995. 208 pp. with 176 black-and-white drawings by the authors, Alexander G. Mikulin, Daphne F. Stone, and Lucy Taylor. ISBN 0-916422-82-8. Price about \$30.00.

This manual will be a useful companion to earlier hand-books published in the United States in the past 34 years, because of the numerous nomenclatural changes and the increase of knowledge about lichens during that time. It will be especially useful in the western part of the continent.

The volume is well designed and makes good use of space, with lists of abbreviations on the inside covers and the insertion of drawings within the keys. The introductory portion provides helpful suggestions for

beginners in lichenology, but the discussion of distribution patterns and habitats should be of wider general interest. Two sets of keys are provided: one to basidiomycetous lichens and to ascomycetous lichens of different forms—foliose, gelatinous, squamulose, and fruticose; the other, to families and genera within families. These are followed by illustrated keys to species. There is also a key to phycobionts. There are convenient tables comparing species within *Bryoria*, *Hypogymnia*, and *Xanthoparmelia*.

The information provided in most genera appears to be beyond serious criticism. However, the key to *Usnea* species would have been more useful if the drawing said to represent *U. scabrata* showed the abundant large papillae and the deep, flat-bottomed pits which are the chief diagnostic characters of this taxon (the lower part of a large branch with the papillae worn off, if that is what was drawn, should not have been shown); if there had been more information about papilla shape and size

(so that the user would learn that the papillae of *U. filipendula* and *U. diplotypus* are similar); and if the taxa referred to under the *Usnea plicata* group had been separate entries, carefully described, and entered as numbered *Usnea* species. Also, I suspect that the pendent *U. scabiosa* Motyka, described from northern New Mexico, may be masquerading here as *U. scabrata* ssp. *nylanderiana*.

Isabelle Tavares

Errata

In the article "*Toninia* in California" by Charis Bratt and Darrell Wright (Bull. Cal. Lich. Soc. 2[1]: 5-7), the key fails at couplet 5. As a replacement, Charis Bratt offers the following key, which, she finds, works in practice:

- 1a Spores 1-septate 2
- 1b Spores more than 1-septate 4

- 2a Epithecium olivaceous to bright green, K-, N+ 2
talparum
- 2b Epithecium gray, K+, N+ 3

- 3a Thallus usually pruinose; epithecium often containing crystals; spores broadly to narrowly fusiform, 1-septate, 12-24 X 3-5 μm 3a
sedifolia
- 3b Thallus usually epruinose; epithecium seldom containing crystals; spores broadly fusiform, 1-septate, 10-16.5 X 3.5-4.5 μm 3b
massata

- 4a Spores 1- to 3-septate 5
- 4b Spores mostly 3-septate 6
- 4c Spores 3- to 7-septate 7

- 5a Epithecium dark brown, sometimes with a faint green tinge; K-, N- (or sometimes faintly N+); spores ellipsoid to bacilliform, 1- to 3-septate, 10.5-19 X 3.5-5 μm 5a
verrucarioides
- 5b Epithecium dark reddish brown, K+ red, N-; spores 1- to 3- (-4) septate, narrowly ellipsoid to bacilliform, 12-31 X 3-4.5 μm 5b
ruginosa pacifica

- 6a Epithecium gray, K+, N+ violet, hypothecium pale brown to colorless; spores (1-) 3-septate, 17-42.5 X 3.5-5 μm 6a
submexicana
- 6b Epithecium dark olivaceous to bright green, K-, N+ violet; hypothecium dark reddish brown (paler in upper part); spores (1-) 3-septate, 12-22.5 X 4-5.5 μm 6b
aromatica

- 7a Epithecium dark olivaceous to bright green, K-, N+ violet; hypothecium pale brown to colorless; spores acicular, 3- to 7-septate, 23-41.5 X

- 2.5-4.5 μm *squalida*
- 7b Epithecium dark reddish brown, K+ red, N-; spores 3- to 7- (-9) septate, 20-42 X 3-4 μm *ruginosa ruginosa*

Wright would have preferred two dichotomies at lead 4 with the distinction between 4a and 4b more sharply drawn, if possible, but he is not able to guarantee that his proposed key would be better in practice.

Darrell Wright

For figure 1 in the same article substitute the following:

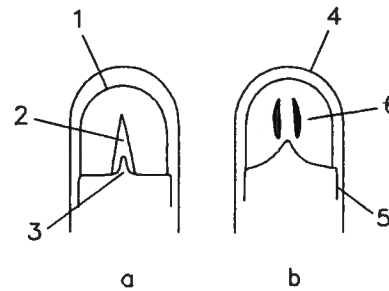


Fig. 1. Ascus apices of *Toninia cinereovirens* (Schaer.) Massal. (a), and *Mycobilimbia obscurata* (Sommerf.) Rehm. (b). 1. I+/- tholus (apical sac); 2. Axial mass. 3. Ocular chamber. 4. Outer wall of ascus. 5. Inner wall. 6. I+ tubular structures ("Röhrenstrukturen").

News

Lichens on Cedar Roofs—Study Welcomes Participants

A survey is currently under way of the lichens, mosses, and algae which colonize cedar shake and shingle roofs in California. If you or any neighbors or friends have cedar roofs and might be willing to take part in this study, please contact Myles Wilson at the UC Berkeley Forest Products Laboratory, (510)525-4879 or (510)215-4229.

Summer Lichen Classes Held

Beginning classes given by Barbara Lachelt were held on two Saturdays, July 8 and 22, at San Francisco State University. It was a very enthusiastic group practicing terms and keys using Hale and Cole's *Lichens of California*.

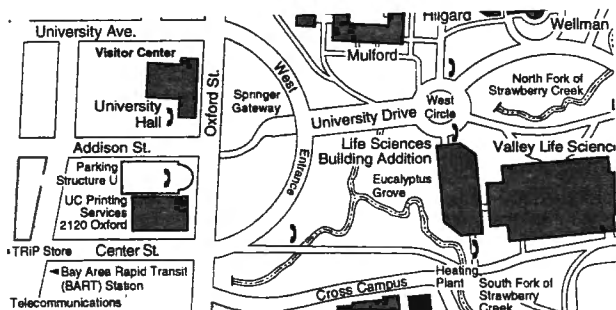
A crustose lichen seminar was presented on July 15 by Charis Bratt. It was illustrated by microscope slides of

crustose genera projected on a TV monitor. Exhaustive preparation went into this program. Fourteen people were present for the crustose seminar, and eight signed up for the classes. Kevin Foley helped greatly with the logistics of these three Saturdays. Dr. Dennis des Jardins arranged for the use of the lab and microscopes. All the assistance provided by San Francisco State University is much appreciated.

Barbara Lachelt

Upcoming Events

January 12: The Society is sponsoring an informal reception for CALS member Dr. Tom Nash of Arizona State University following a lecture on the Sonoran Desert Lichen Project to be given by Dr. Nash at the Jepson Herbarium at 8 pm that evening. Come to Room 1001 next to *Tyrannosaurus rex* on the first floor of the Valley Life Science Building on the UC Berkeley campus. Someone will be at the north end of the building to let you in. Evening parking is available in Faculty-Staff, Student, and non-restricted Central Campus permit areas. Bring \$3- in quarters for the meter. The Valley Life Science Building is also within walking distance of BART. See map.



January 20-21: Field trip to the University of California's Hastings Reserve in Carmel Valley. The Reserve is situated 26 miles southeast of Carmel at 38601 East Carmel Valley Road. Cost will be \$10- for one night, including Saturday dinner and Sunday breakfast, or \$15- including Saturday breakfast also (if you come Friday evening). You will be responsible for Friday dinner, all lunches, and your beverages. The Reserve charges a modest \$2.50 a night, which is included in the above fee. There are 14 beds in rooms and a sleeping porch, plus room for tents and campers.

Please let Janet Doell know at (510)236-0489 if and when you plan to come or if you need more information. I will send you a map and further instructions, including the gate combination. Be sure to call me if, for some reason, you don't get these instructions in time.

April 20-21: Field trip to Morro Bay State Park. May include a seminar at the Morro Bay Museum, located

within walking distance of the campground. There are motels in the area for those not caring to camp. More details will be appearing closer to the date. Keep the weekend free if you are interested. If you wish to sign up early, call either Janet Doell at (510)236-0489 or Charis Bratt at (805)682-4711, ext. 327.

June 15-16: Lichen classes will again be offered by Barbara Lachelt at San Francisco State University. There will be a fee of \$10- for each of the two days. Please call Barbara at (415)456-2918 if you are interested.

October 19-20: Field trip in the Siskiyou Mountains in Southern Oregon. We have invited the Northwest Lichen Guild to join us for this event. This will be a real camp-out in lichen rich country. Details in a future *Bulletin*.

President's Corner

The year 1995 has been a good one for CALS. Membership has grown to 117, events are well attended, and the *Bulletin* is being recognized in the literature lists.

With our second year coming to an end it is time for elections. The Society is now of such a size that a longer roster of officers is required to administer our activities efficiently. These officers will also serve as the Board of Directors for the next two years. The Nominating Committee has prepared the following slate of officers:

President:	Janet Doell
Vice President:	Charis Bratt
Secretary:	Elizabeth Sampson
Treasurer:	Bob Stewart
Member-at-Large:	Darrell Wright

You will find a ballot enclosed with this issue of the *Bulletin*.

As my first term in office comes to a close, I would like to thank all those who helped get the California Lichen Society off the ground, with special thanks going to Harry and Ellen Thiers, Barbara Lachelt, Charis Bratt, Darrell Wright, Isabelle Tavares, and Bill Hill. The support of all our members near and far has been much appreciated.

Dues—It's That Time of Year Again

Over the past two years CALS has grown to a point where our dues of \$10.00 are no longer adequate to pay for the very important *Bulletin* as well as to support our other programs, activities, and mailings. In order to continue to make the Society available to all our members and yet increase our income, we are presenting the following membership schedule:

Regular	15.00	The Bulletin and all activities
Sponsor	25.00	of the Society are available to
Donor	35.00	all members regardless of their
Student	10.00	dues category.
or Hardship		

To facilitate planning, please remit your dues payment between January and March, if at all possible. Thank you.

Welcome to Our One Hundredth Member

With the receipt of a gift membership to CALS from his friend Ernie Fremont (CALS member since May of this year), Joe Callizo became the 100th individual to join the California Lichen Society.

Following a childhood spent in a ranching situation in Pope Valley, Napa County, Joe studied zoology at UC Berkeley and UC Davis. During this time he was also interested in plants of all kinds, having been curious about things "that I saw for which I had no names." This interest led to his becoming an outstanding, active botanist within the borders of Napa County. Serpentine vegetation has been one of his special interests, and he has published on that subject.

Joe is now caretaker and manager of the 730 acre Wantrup Preserve in Polk Valley. This area is kept as a wildlife refuge by the Napa County Land Trust, an organization similar to the Nature Conservancy but limited to Napa County. Joe is on the Board and chairs two committees. He is also very active in the local chapter of the California Native Plant Society and has served on the State Board of that organization.

Joe is anxious to host a CALS field trip to Wantrup Preserve where a big house with three spare bedrooms and a large living room is available for visitors, along with plenty of room for campers outside. Any member of CALS is also welcome to go to the Preserve and scout around with Joe and Ernie. Any member wanting to take him up on this offer can reach him at Wantrup Preserve, 4733 Hardin Road, St. Helena, CA 94574, (707)963-2225.

It would appear from all this that Joe has much to offer CALS, and we welcome him as our 100th member. Let's see what we can offer him.

In Memoriam

It is with sadness that I report the death from lung cancer of CALS member Jane Becker-Haven this past summer. Jane was a docent at Stanford University's Jasper Ridge Biological Preserve. An avid birder and active in the local Audubon Society, she was interested in many aspects of natural history. Her cheerful presence will be missed by her many friends and associates.

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